

Application Note: Using two DCv3 type sound systems with one speaker.

Various applications of the DCv3 sound card are shown on the following pages along with the Revolution receiver offered by AristoCraft Trains. The purpose of utilizing dual systems is to obtain more polyphonic sound from the systems. This also allows for different volume levels for the main sound and the Horn/Whistle and Bell sounds.

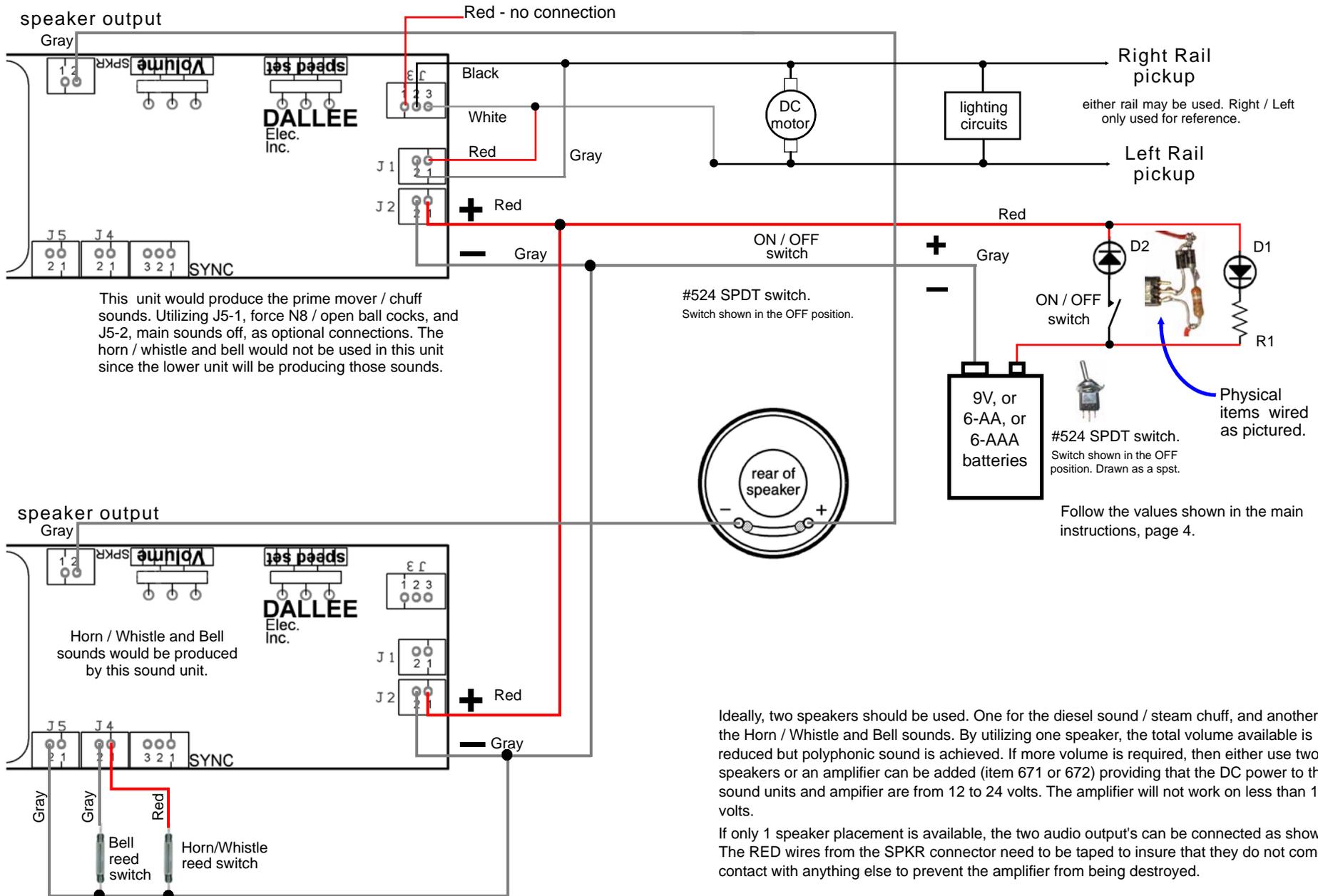
Ideally, two speakers should be used. One for the diesel sound / steam chuff, and another for the Horn / Whistle and Bell sounds. By utilizing one speaker, the total volume available is reduced but polyphonic sound is achieved. If more volume is required, then either use two speakers or an amplifier can be added (item 671 or 672) providing that the DC power to the sound units and amplifier are from 12 to 24 volts. The amplifier will not work on less than 12 volts.

If only 1 speaker placement is available, the two audio output's can be connected as shown. The RED wires from the SPKR connector need to be taped to insure that they do not come in contact with anything else to prevent the amplifier from being destroyed.

Wiring conventions:

"•" = connection between the wires. Without the "•" there is no connection, the wires are merely passing over each other.

Using dual auto-Horn/Whistle sound systems with track power and optional rechargeable battery. (steam units utilizing auto-chuff)



This unit would produce the prime mover / chuff sounds. Utilizing J5-1, force N8 / open ball cocks, and J5-2, main sounds off, as optional connections. The horn / whistle and bell would not be used in this unit since the lower unit will be producing those sounds.

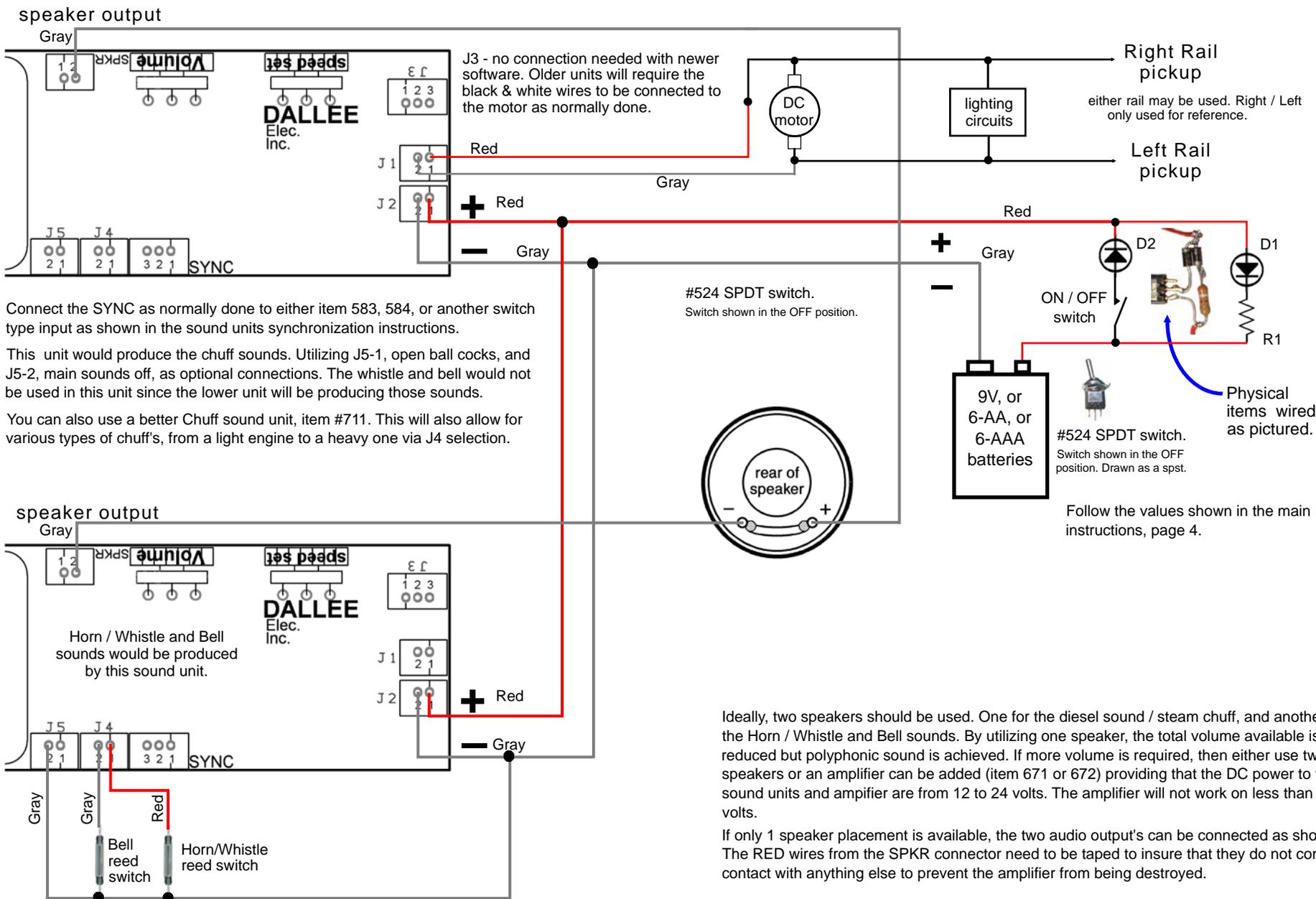
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Using dual auto-Whistle sound systems with track power and optional rechargeable battery. (utilizing synchronized chuff)



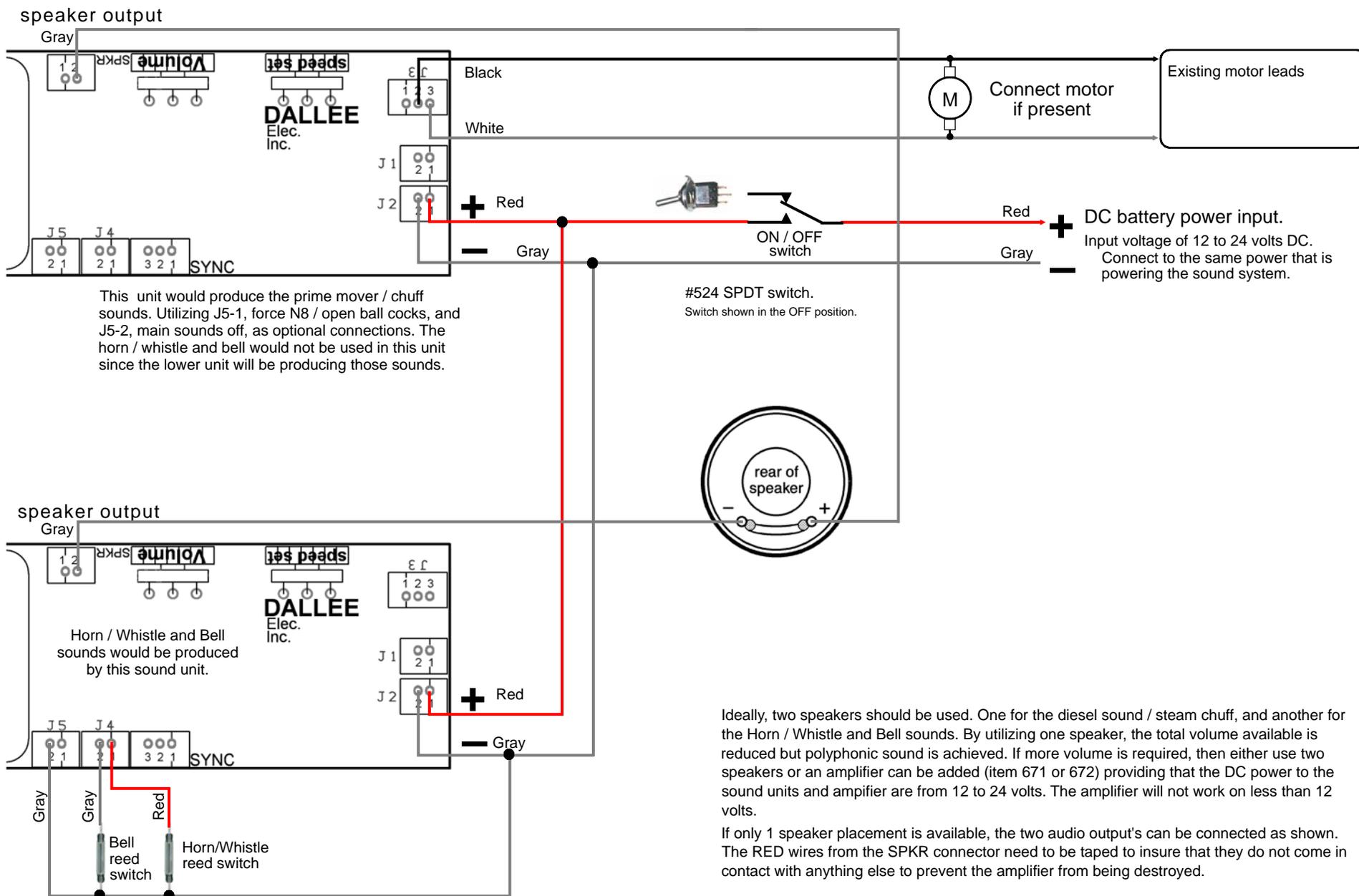
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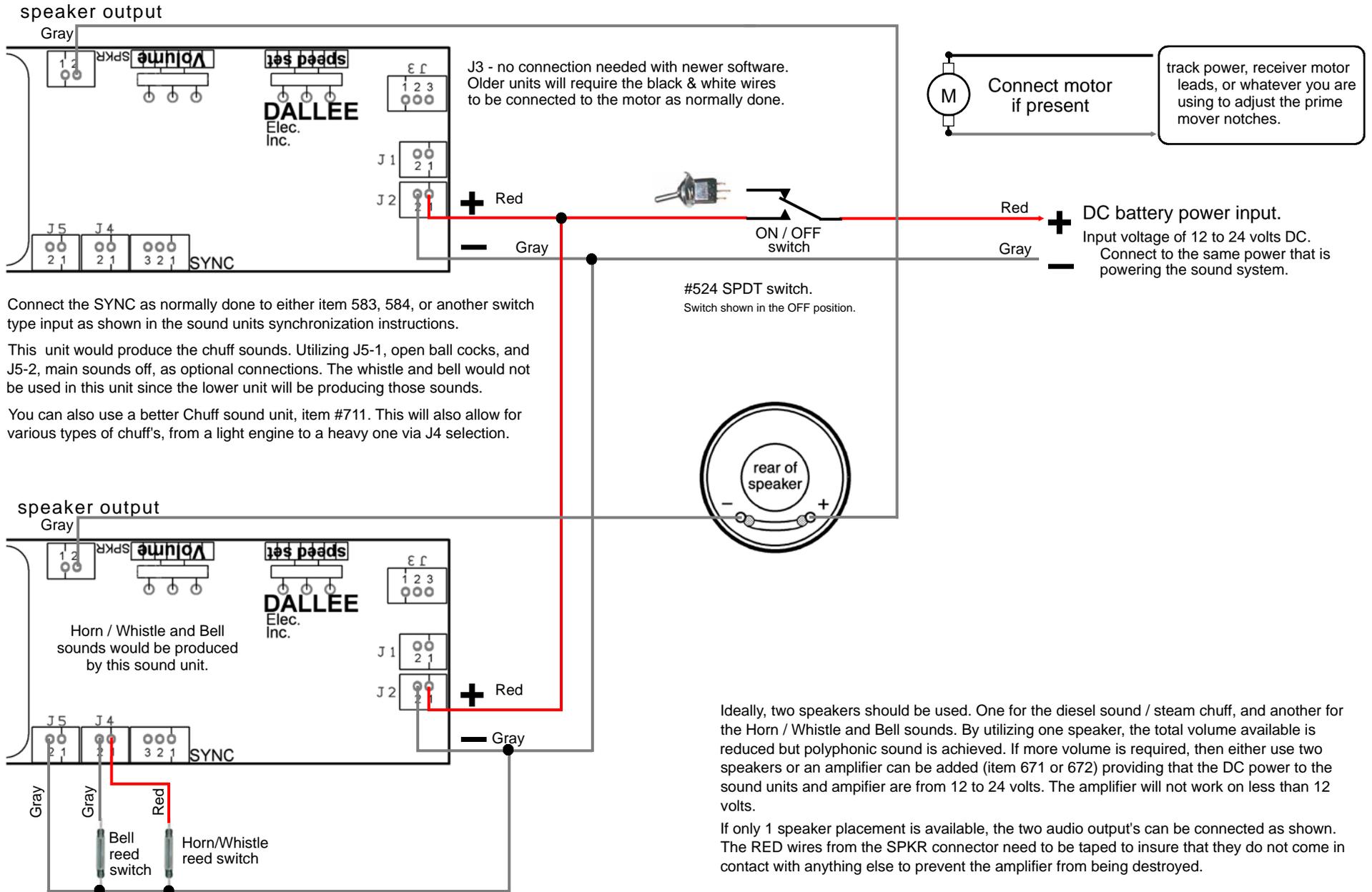
Using dual auto-Horn/Whistle sound systems and battery power. (steam units utilizing auto chuff)



Wiring conventions:

"•" = connection between the wires. Without the "•" there is no connection, the wires are merely passing over each other.

Using dual auto-Whistle sound systems and battery power. (with synchronized chuff)



Connect the SYNC as normally done to either item 583, 584, or another switch type input as shown in the sound units synchronization instructions.

This unit would produce the chuff sounds. Utilizing J5-1, open ball cocks, and J5-2, main sounds off, as optional connections. The whistle and bell would not be used in this unit since the lower unit will be producing those sounds.

You can also use a better Chuff sound unit, item #711. This will also allow for various types of chuff's, from a light engine to a heavy one via J4 selection.

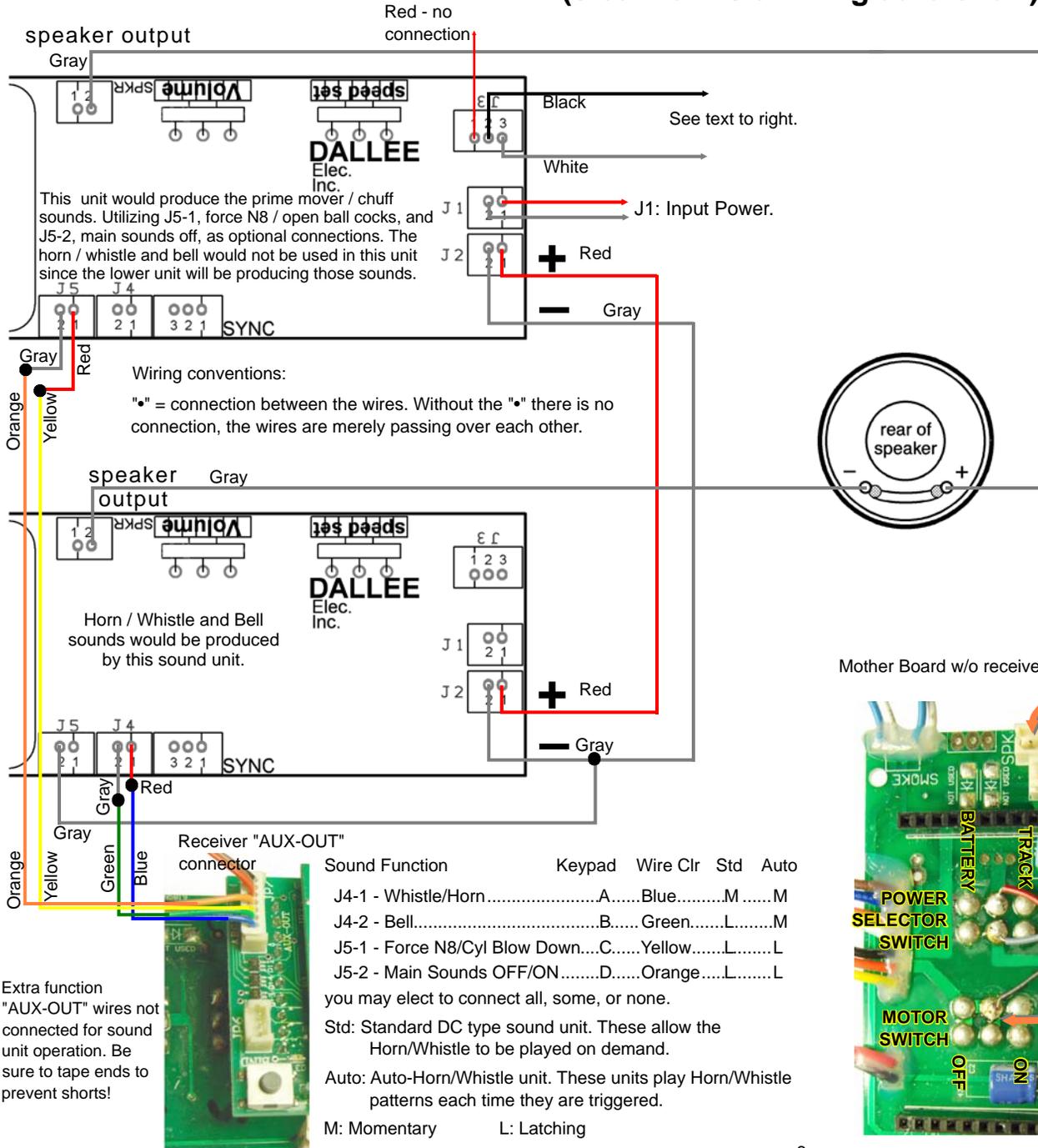
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Wiring conventions:

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Using dual standard DCv3 or Auto-Horn/Whistle sound systems with AristoCraft Revolution receiver. (steam units utilizing auto-chuff)



AristoCraft boards labeled "SOUND PWR" are actually connected to the "Motor Power" before the motor "On/Off" switch. While they can be connected to this connector, it is not ideal since the motor switch does not disconnect this connection when the motor power is switched off. Connect these two wires to either the motor power leads or the "Sound Pwr" connector wires. This is the same that goes to the motor. The "Sound Power" should come from the track or battery and not the motor in this application. See wiring example on lower part of this page.

Diesel sound: This connection tells the sound system what speed / RPM to operate the diesel's prime mover sound.

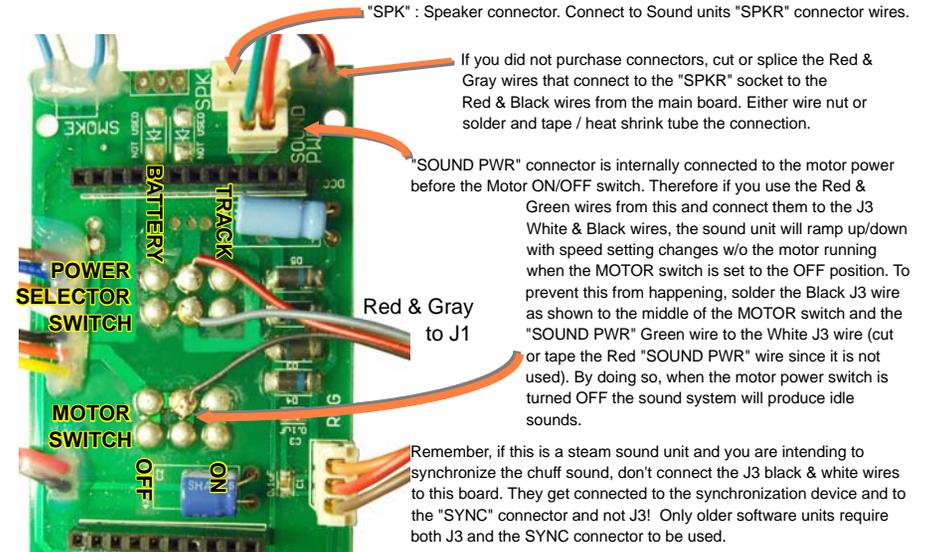
Steam sound: This connection tells the sound system what rate to operate the auto-chuff. If you are using the "SYNC" input, don't connect anything to J3!

J1: Input Power.

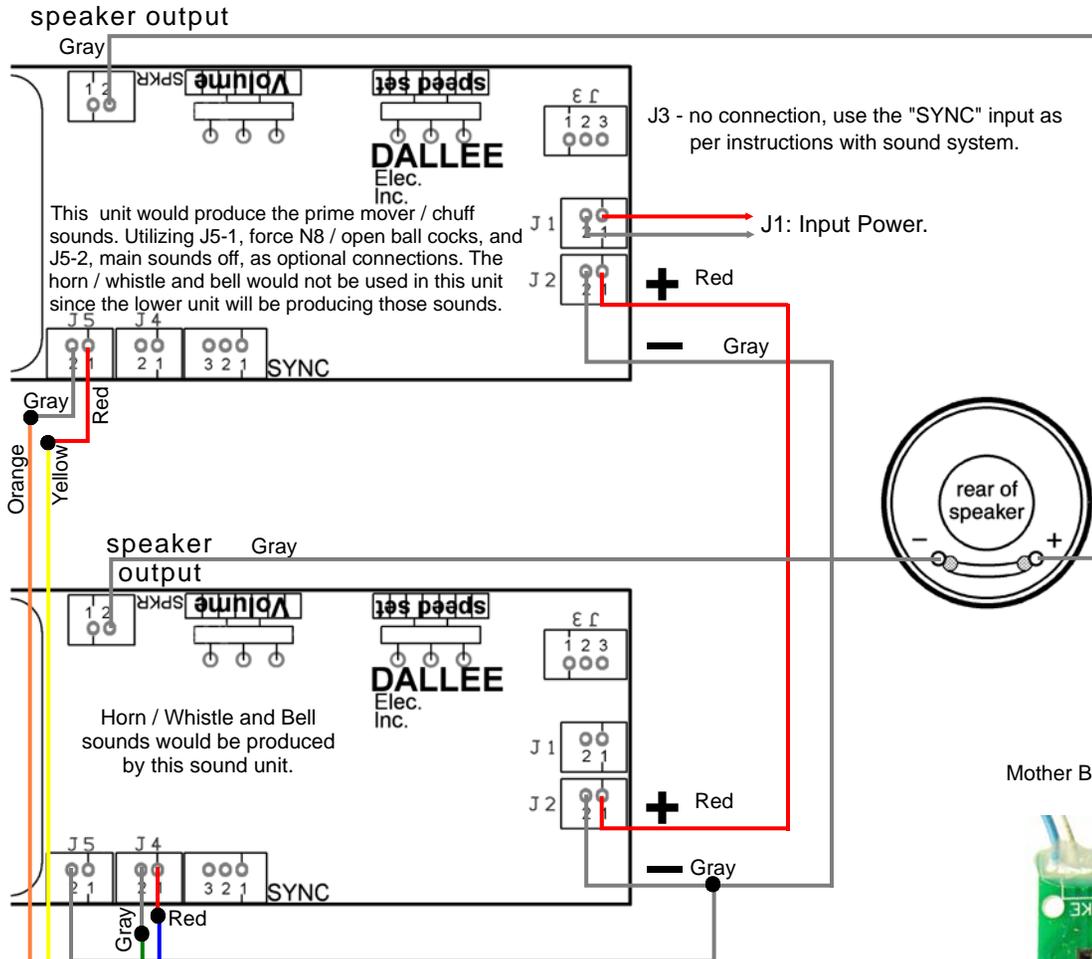
Input voltage of 7 to 30 volts DC or AC.

Connect to the track input from each truck, detailed picture shown below for AristoCraft engines. Remember that track powered units will not operate properly until the track power is at least above 6 volts. Amplifiers require a minimum of 12 volts DC to operate! Your receiver battery power may be the same power as the sound system and amplifier (if present). If you have a different battery for the receiver and sound system, then you should connect the "-" of each battery system together.

Mother Board w/o receiver:



Using dual standard DCv3 or Auto-Whistle sound systems with AristoCraft Revolution receiver. (with synchronized chuff)



AristoCraft boards labeled "SOUND PWR" are actually connected to the "Motor Power" before the motor "On/Off" switch. While they can be connected to this connector, it is not ideal since the motor switch does not disconnect this connection when the motor power is switched off. Connect these two wires to either the motor power leads or the "Sound Pwr" connector wires. This is the same that goes to the motor. The "Sound Power" should come from the track or battery and not the motor in this application. See wiring below.

J1: Input Power.

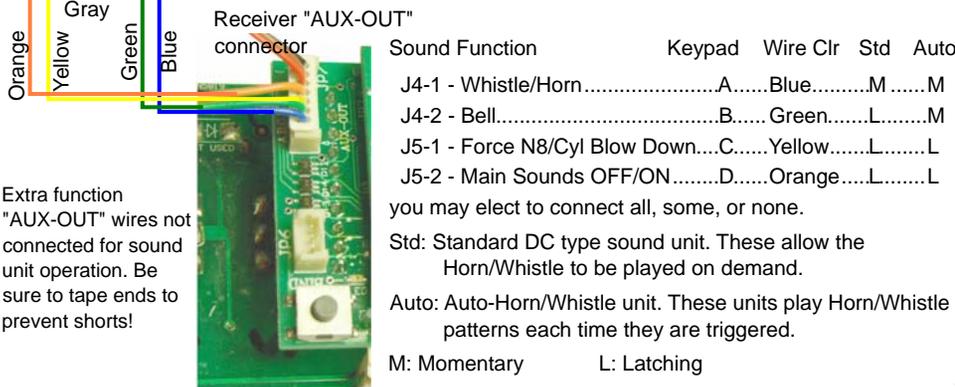
Input voltage of 7 to 30 volts DC or AC.

Connect to the track input from each truck, detailed picture shown below for AristoCraft engines. Remember that track powered units will not operate properly until the track power is at least above 6 volts. Amplifier's require a minimum of 12 volts DC to operate! Your receiver battery power may be the same power as the sound system and amplifier (if present). If you have a different battery for the receiver and sound system, then you should connect the "-" of each battery system together.

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Extra function "AUX-OUT" wires not connected for sound unit operation. Be sure to tape ends to prevent shorts!

Mother Board w/o receiver:

